

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes NERC approved and effective, these defined terms will be removed from the individual standard and added to the Glossary.

Design Plan: The collection of the system assumptions and performance criteria that are the basis for the UFLS program in a Planning Coordinator's area. The design plan includes consideration of such items as the minimum desired frequency, the range of island load versus generation balance, system inertia, and maximum desired overshoot frequency.

Functional Design Specification: The particular UFLS program design details that are to be implemented by Distribution Providers. The design details include such elements as the number of load shedding steps, the trigger frequency at each step, the percentage of total Distribution Provider load to be shed at each step, and the maximum time delay associated with each step.

Style Definition: Bullet: Indent: Left: 0.65",
Tab stops: 0.85", List tab + Not at 1.35"

Style Definition: Measures: Indent: Left:
0.25"

Formatted: Border: Top: (Single solid line,
Auto, 0.5 pt Line width)

A. Introduction

1. **Title:** Automatic Underfrequency Load Shedding Requirements

2. **Number:** **PRC-006-MRO-01**

3. **Purpose:**

The purpose of this standard is to develop, coordinate, implement and document Automatic Underfrequency Load Shedding (UFLS) requirements. The UFLS program is to provide last resort system preservation measures to assist in the recovery of mitigate unwanted low frequency to acceptable levels following underfrequency events by restoring reasonable balance between load and generation. econditions.

3.4. **Applicability:**

3.4.1. Planning Coordinator (PC)

3.2.4.2. Distribution Provider (DP)

3.3.4.3. Transmission Owner (TO)

3.4.4.4. Generator Owner (GO)

5. **Effective Date:** 1st day of the 1st quarter one year following last appropriate Regulatory Approval.

Implementation plan timeframes

(This text was included for convenience in the comment version of the standard, but, financial sanctions will be removed in the ballot version of the standard.)

R1 – Complete a Design Plan within 1 year after applicable Regulatory Approval, unless granted an extension by the MRO

R2, R3 – Develop become effective. Note: the implementation time frame for R9 and distribute the initial Functional Design Specifications within 1 year after completion of the Design Plan, unless granted an extension by the MRO R10.

R5 – Implement the assigned Functional Design Specifications within 1 year after the Functional Design Specifications are received, unless granted an extension by the MRO.

R11, R12 – Complete and distribute an initial UFLS program assessment report within 2 years of all its Functional Design Specifications being implemented, unless granted an extension by the MRO.

B. Requirements

R1. Each Planning Coordinator shall have a Design Plan for its area and provide its Design Plan to its adjacent Planning Coordinators. Each Planning Coordinator shall provide comments on its adjacent PC's Design Plan and should achieve concurrence on each other's Design Plan. The Design Plan shall consider the

following elements: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

- Reasonable number of step blocks and associated frequency set points
- Suitable minimum percentage of total connected forecasted annual peak hour Load assigned to trip in its area and appropriate percentage of connected forecast load for each step block
- Proper intentional and total tripping time delays
- Generation off nominal frequency protection
- Undervoltage inhibit settings
- Appropriate types of off-nominal frequency relays
- Fitting Exemption criteria
- Tie tripping schemes, if applicable
- Islanding schemes, if applicable
- Automatic load restoration schemes, if applicable
- Any other schemes that are a part of, or may impact, the UFLS programs, if applicable

R2. Each Planning Coordinator shall have a UFLS program Functional Design Specification for each of the Distribution Providers in its area. The Functional Design Specification shall include but not be limited to the following elements: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

- Number of step blocks and associated frequency set points
- Minimum percentage of total connected forecasted annual peak hour Load assigned to trip in its area and the percentage of connected forecast load for each step block
- Intentional and total tripping time delays

R3. Each Planning Coordinator shall distribute a Functional Design Specification to each Distribution Provider in its area and provide all of the Functional Design Specifications to each of its adjacent Planning Coordinators. Each Planning Coordinator should provide comments on its adjacent PC's Functional Design Specification. [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]

R4. Each Distribution Provider shall review and if necessary revise its portion of the UFLS program each calendar year and within 15 months of the last evaluation of its UFLS program in accordance with its assigned Functional Design Specification(s). [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]

The annual review shall include the following:

- Updating of the UFLS program load data to reflect the next year's forecast peak hour Loads
- Consideration of the characteristics and criticality of the end use Loads that are connected to its facilities, if provided by the associated Load Serving Entities

R5. Each Distribution Provider shall implement its assigned UFLS program Functional Design Specification prior to the next forecast peak Load season, unless granted an extension or exemption by its Planning Coordinator. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

R6. Each Generator Owner with automatic underfrequency protection relays installed in the MRO footprint shall have relay trip settings that are equal to or slower than the minimum tripping time delays in the following table: [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

R1. ~~Each Planning Coordinator shall develop and maintain a documented methodology to determine areas of credible islanding within its area. [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]~~

~~The methodology shall include the following elements or an explanation why they were not included:~~

- ~~• Historical islanding events~~
- ~~• Historical severe disturbance events~~
- ~~• Any network islanding scheme~~
- ~~• Identity of the connecting elements for credible islands~~
- ~~• Identity of exempt critical loads within each credible island~~
- ~~• Identity of exempt credible islands~~
- ~~• How the registered entities and stakeholders, including adjacent entities, will assist in the UFLS development, including studies and analyses, and provide concurrence~~

R2. ~~Each Planning Coordinator shall use its methodology to determine credible islands within its area of responsibility and identify the credible islands that must have UFLS programs. [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]~~

R2.1. ~~Each Planning Coordinator shall evaluate and confirm credible islanding within their area of responsibility every calendar year and within 15 months of the last evaluation.~~

R2.2. ~~Each Planning Coordinator shall make its credible island determination available for inspection and technical review by those entities directly and materially affected by the reliability of the MRO Bulk Electric System (BES), within 30 days of the determination.~~

R2.3. ~~If entities directly and materially affected by the reliability of the MRO BES provide written comments on its credible island determination, the Planning Coordinator shall provide a written response to that commenting entity within 45 calendar days of receipt of those comments. The response shall indicate whether a~~

~~change will be made to its credible island determination and, if no change will be made, the reason.~~

~~**R3.**— Each Planning Coordinator shall have a documented methodology for design and performance of its UFLS program. [*Violation Risk Factor: Lower*] [*Time Horizon: Long-term Planning*]~~

~~**R3.1.**— The methodology shall include the following elements:~~

- ~~● Frequency set points and timing delays~~
- ~~● A minimum of 30% percent of its total connected forecasted annual peak hour Load assigned to trip in each designated island~~
- ~~● Frequency decline shall be arrested at no less than 58.0 Hz, unless generation protection in the credible island warrants a lower limit, the frequency shall not remain below 58.5 Hz for greater than 10 seconds, cumulatively per event, and shall not remain below 59.5 Hz for greater than 30 seconds, cumulatively per event.~~
- ~~● Frequency overshoot resulting from operation of UFLS relays shall not exceed 61.0 Hz and shall not exceed 60.5 Hz for greater than 30 seconds, cumulatively per event. A higher limit may be allowed if it is within the limits stated in IEEE standard C37.106.~~
- ~~● Bulk Electric System voltage during and following UFLS operations shall be controlled such that the per unit Volts per Hz (V/Hz) will not exceed 1.18 for longer than 2 seconds, cumulatively, and will not exceed 1.10 for longer than 45 seconds, cumulatively. A higher limit may be allowed if it is within the limits stated in IEEE standard C37.102.~~
- ~~● Undervoltage inhibit shall not be greater than 75 percent of nominal voltage~~
- ~~● Evaluate and discuss any network islanding schemes, automatic load restoration schemes, network tie tripping schemes, generating unit frequency excursion protection tripping scheme, and other methods of load and resource balancing, including any recognized potential effects on adjacent Planning Coordinators.~~
- ~~● Evaluate applicable reactive power device tripping scheme designs for proper coordination with the proposed UFLS Program designs to avoid excessive BES bus voltage during automatic UFLS events.~~
- ~~● Exemption criteria, such as for small DPs and TOs.~~
- ~~● Off nominal frequency relay types used~~

- ~~Simulation methods used~~
- ~~Maximum breaker interrupting times~~

~~**R3.2.** Each Planning Coordinator shall make its design and performance methodology available for inspection and technical review by those entities directly and materially affected by the reliability of the MRO Bulk Electric System (BES), within 30 business days of the receipt of a request.~~

~~**R3.3.** If entities directly and materially affected by the reliability of the MRO BES provide written comments on its design and performance methodology, the Planning Coordinator shall provide a written response to that commenting entity within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to its design and performance methodology and, if no change will be made, the reason.~~

~~**R4.** Each Distribution Provider shall review, and if necessary make revisions to, its portion of the UFLS program each calendar year and within 15 months of the last evaluation to agree with the overall UFLS program and the design and performance methodology in R3. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

~~The review shall include the following:~~

- ~~Collect information as needed regarding the characteristics and criticality of the end use Load that is in each island and connected to its facilities from the associated Load Serving Entities.~~
- ~~Update the UFLS program load data in each island to reflect next year's projected peak hour Loads.~~

~~**R5.** Each Planning Coordinator shall review its UFLS program each calendar year and within 15 months of the last review and if the updated UFLS program in any island does not agree with the design methodology, then the UFLS program shall be revised to agree with the design methodology. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

~~**R6.** Each Planning Coordinator shall periodically perform an assessment of the expected performance of UFLS programs and related reactive power device tripping schemes, protective schemes or balancing methods in each island in its footprint at least every five calendar years. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*~~

~~**R7.** Each Planning Coordinator shall provide the report to the entities associated with each UFLS programs and related reactive power device tripping schemes, protective schemes, or balancing methods within 30 days. The entities may include Distribution Providers, Transmission Owners, Generator Owners, Transmission Planners, Planning Coordinators, adjacent Planning Coordinators, the MRO, or NERC. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

~~**R8.** Each Distribution Provider or Transmission Owner that owns UFLS relay(s) shall provide new and updated UFLS data to its Planning Coordinator(s) every calendar year and within 15 months of the last submittal. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

~~This information shall include:~~

- ~~• Point where each load, as a part of the UFLS program, is ultimately interconnected to the transmission system~~
- ~~• Percentage of peak load tripped at the transmission interconnection location for each load step~~
- ~~• Frequency trip points for each UFLS step~~
- ~~• Relay operating time delay for each UFLS step~~
- ~~• Nominal circuit breaker operating time~~
- ~~• UFLS relay undervoltage inhibit voltage level~~

~~**R9.** Each Distribution Provider or Transmission Owner shall provide pertinent data for any applicable reactive power devices, system protection schemes, and/or balancing methods (load/resource) that may impact the UFLS programs in the MRO footprint to its Planning Coordinator more than 60 days prior to implementation. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

~~**R10.** Each Generator Owner shall provide (existing or planned) the off-nominal frequency capability limits of its generating units; the settings and time delays of protective relays; and, other schemes that may impact the UFLS program(s) in the MRO footprint to its Planning Coordinator more than 60 days prior to implementation. *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

~~**R11.** Each Generator Owner with automatic underfrequency protection relays installed in the MRO footprint shall have relay trip settings that are equal to or slower than the minimum tripping time delays in the following table: *[Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]*~~

Frequency (Hz)	Minimum Time Delay (Sec)
≥ 59.5	Automatic tripping not permitted Automatic Tripping Not Permitted
≤ 59.5 to > 59.3	2,700
≤ 59.3 to > 59.0	300
< 59.0 to > 58.4	80
≤ 58.4 to > 58.0	30

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

≤58.0 to > 57.6	7.5
≤57.6	0

R6.1. If a generator must be tripped for its own protection outside the specifications in the above Table 1, then the Generator Owner shall arrange for additional automatic Load shedding to be installed by mutual agreement with an acceptable, in addition to that required of Distribution Provider, unless the Generator Owner is granted an exception by its Planning Coordinator. The or Transmission Owner with end use Load connected to their Facilities. This additional automatic Load shedding shall be within the same are a credible island and implemented instituted at the same frequency and time delay as the generator would be expected to trip. The, and an amount of additional Load that is to be tripped shall be agreed upon by the Distribution Provider, Generation Owner, and Planning Coordinator.

R7. Each Distribution Provider that has an assigned Functional Design Specification(s) shall provide new and updated UFLS data to the associated Planning Coordinator(s) within 60 days after being requested by its, Transmission Owner, and Generation Owner shall implement its portion of the UFLS Program or related protective scheme prior to the next projected peak season as specified by the Planning Coordinator. [Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]

R8. Each Distribution Provider and Transmission Owner shall provide to its Planning Coordinator(s) the applicable data of reactive power devices controlled in association with, but separate from, the UFLS program, as well as the applicable of other schemes that may impact the UFLS programs in the MRO footprint, prior to placing them in service. [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]

R9. Each Generator Owner shall provideIf a Distribution Provider or Transmission Owner with end use Load connected to their facilities cannot comply with this requirement for its facilities due to its Planning Coordinator(s) the applicable data of the off-nominal frequency relay settings of its generating units having less than or equal to 30 feeders and the settings and time delays of other protective schemes that may impact the have not aggregated their Load with other Distribution Providers or Transmission Owners to implement a collective UFLS program, that Distribution Provider or Transmission Owner respectively shall still implement a UFLS program(s) in the MRO footprint prior to placing them in service. [Violation Risk Factor: Lower] [Time Horizon: Long-term Planning]

R10. Each Planning Coordinator shall review but may request an exemption from the Planning Coordinator for the minimum number of steps and the minimum and if necessary revise maximum frequency set points.

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

~~Each Planning Coordinator shall update~~ its UFLS program database every calendar year and within 15 months of the last ~~review~~update. [*Violation Risk Factor: Lower*] [*Time Horizon: Long-term Planning*]

The database shall include:

- UFLS program data
- Generator unit off-frequency data
- Island information, if applicable
- Reactive power device information, if applicable
- System tripping schemes, if applicable

R11. Each Planning Coordinator shall review the UFLS program data for its area and perform an assessment of the expected performance of the UFLS program and related reactive power device tripping schemes or protective schemes in its area at least every five calendar years. [*Violation Risk Factor: Medium*] [*Time Horizon: Long-term Planning*]

R12. Each Planning Coordinator shall have a report of its required UFLS program assessments and provide its assessment reports to at least the associated Distribution Providers, associated Transmission Planners, and its adjacent Planning Coordinators. [*Violation Risk Factor: Lower*] [*Time Horizon: Long-term Planning*]

- ~~Credible islands~~
- ~~UFLS program information (location, size, setting, time duration)~~
- ~~Applicable generation unit frequency information (e.g. performance limits, inertia and frequency excursion protection scheme information)~~
- ~~Applicable reactive power device information~~
- ~~The tripping schemes~~

~~R12. The Planning Coordinator shall provide the UFLS database to MRO or NERC in their format within 30 calendar days of their request. [*Violation Risk Factor: Lower*] [*Time Horizon: Long-term Planning*]~~

C. Measures

M1. Each Planning Coordinator shall have documentation of the Design Plan for its area and evidence that it provided its Design Plan to its adjacent Planning Coordinators, as well as provided comments on its adjacent Planning Coordinators' Design Plans as required in R1.

M2. Each Planning Coordinator shall have a Functional Design Specification for each Distribution Provider in its area as required in R2.

M3. Each Planning Coordinator shall have evidence that it distributed a Functional Design Specification to each of its Distribution Providers, as well as all of the

Function Design Specifications to each of its adjacent Planning Coordinators as required in R3.

- M4. Each Distribution Provider shall have evidence that it reviewed its load data according to the schedule and if necessary revised its portion of the UFLS program as required in R4.
- M5. Each Distribution Provider shall have evidence as required in R5 that either 1) it implemented its assigned UFLS program functional design specification or 2) it was granted an extension or exemption from its Planning Coordinator.
- M6. Each Generator Owner shall have evidence as required in R6 that: 1) its automatic underfrequency protection relay trip settings meet the minimum tripping time delays in Table 1; 2) it has an exemption from its Planning Coordinator; or 3) it obtained acceptable additional Load shedding.
- M7. Each Distribution Provider that has assigned a Functional Design Specification(s) shall have evidence that it provided new and updated UFLS data as required in R7.
- M8. Each Distribution Provider and Transmission Owner shall have evidence that it provided details of controlled reactive power devices, as well as any other applicable schemes prior to placing them in service as required in R8.
- M9. Each Generator Owner shall have evidence that it provided details of off-nominal frequency relay settings and setting and time delays of other protective relay or schemes as required in R9.
- M10. Each Planning Coordinator shall have evidence that it reviewed and if necessary revised its UFLS program database as required in R10.
- M11. Each Planning Coordinator shall have evidence that it reviewed the UFLS program data in its area and performed an assessment of the expected performance of the UFLS programs as required in R11.
- M12. Each Planning Coordinator shall have evidence that it provided its UFLS program assessment report(s) to the noted entities as required in R12.

~~M1. — Each Planning Coordinator shall provide a credible islanding methodology document that includes the elements in R1 or shall provide an explanation of why the omitted elements were not included.~~

~~M2. — The Planning Coordinator shall provide documentation detailing its determination of credible islands within the previous 15 months, specifying those that require UFLS, and that such evaluation was provided to applicable (see R2.2) Transmission Owners, Distribution Providers and adjacent Planning Coordinators within 30 days of the determination.~~

~~M3. — Each Planning Coordinator shall provide evidence that comments were responded to per R2.3 within 45 calendar days of receipt.~~

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

- ~~M14. — Each Planning Coordinator shall provide a documented methodology for design and performance of its UFLS program that includes the elements in R3.1.~~
- ~~M15. — Each Planning Coordinator shall provide evidence of the distribution of the methodology within 30 business days of a request per R3.2.~~
- ~~M16. — Each Planning Coordinator shall provide evidence that comments were responded to per R3.3 within 45 calendar days of receipt.~~
- ~~M17. — Each Distribution Provider shall provide evidence (such as email, US Mail, worksheets, etc.) that it reviewed its UFLS program in the previous 15 months, and made revisions as necessary per R4.~~
- ~~M18. — Planning Coordinator shall provide evidence that it reviewed the UFLS plan for each island in its footprint in the previous 15 months, and compared it with the overall UFLS plan to ensure consistency per R5.~~
- ~~M19. — Each Planning Coordinator shall provide evidence that a valid assessment of expected UFLS program performance was performed per R6.~~
- ~~M10. — Each Planning Coordinator shall provide evidence (such as U.S. mail, memos, or email) that a valid assessment report was distributed to applicable entities per R7.~~
- ~~M11. — Each Distribution Provider or Transmission Owner that owns UFLS relay(s) shall provide evidence that it provided new and updated UFLS data elements to its Planning Coordinator per R8.~~
- ~~M12. — Each Distribution Provider or Transmission Owner with reactive power devices, system protection schemes, or load and resource balancing methods that may impact the UFLS programs in the MRO footprint shall provide evidence that the data pertaining to those devices was provided to its Planning Coordinator per R9.~~
- ~~M13. — Each Generator Owner shall provide evidence that it supplied the off-nominal frequency capability limits of its generating units and any frequency excursion protection system data that may affect the UFLS program(s) in the MRO footprint to its Planning Coordinator per R10.~~
- ~~M14. — Each Generator Owner with automatic underfrequency protection relays installed in the MRO footprint shall provide evidence that its relay trip settings are equal to or slower than the minimum tripping time delays as specified in the table in R11.~~
- ~~M15. — Each Distribution Provider, Transmission Owner, and Generation Owner with UFLS responsibility shall provide evidence (or an exemption document) that it implemented its portion of the UFLS Program or related protective scheme per R12.~~
- ~~M16. — Each Planning Coordinator shall provide evidence that it updated its UFLS program database elements within 15 months of the previous update per R13.~~

~~M17. The Planning Coordinator shall provide evidence that it provided the UFLS database to MRO or NERC within 30 calendar days of their request per R14.~~

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

Compliance monitor: MRO

1.2. Compliance Monitoring Period and Reset ~~Timeframe~~**Time Frame**

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Compliance Violation Investigations
- The Performance-Reset Period shall be 12 months from the last finding of noncompliance.
- Self Report

1.3. Data Retention

All documentation is to be retained that demonstrates compliance with the Requirements and Measures since the last Compliance Audit. Current plan is available at all times.

If an entity is found non-compliant the entity keeps information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a Compliance Violation Investigation is retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor.

The Compliance Monitor keeps the last periodic audit report and all requested and submitted subsequent compliance records.

1.4. Additional Compliance Information

None

2. Violation Severity Levels

R #	Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	<p><u>The documented Design Plan did not consider one or two of the required elements.</u></p> <p><u>The Planning Coordinator did not include or provide an explanation for 1 of the criteria in its methodology.</u></p>	<p><u>The documented Design Plan did not consider three or four of the required elements.</u></p> <p><u>OR</u></p> <p><u>Provided its Design Plan to some, but not all, of its adjacent Planning Coordinators.</u></p> <p><u>OR</u></p> <p><u>Provided comments back to some, but not all, of its adjacent Planning Coordinators</u><u>The Planning Coordinator did not include or provide an explanation for 2 of the criteria in its methodology.</u></p>	<p><u>The documented Design Plan did not consider five or more of the required elements.</u></p> <p><u>OR</u></p> <p><u>Did not provide its Design Plan to any of its adjacent Planning Coordinators</u></p> <p><u>OR</u></p> <p><u>Did not provide any comments back to its adjacent Planning Coordinators.</u><u>The Planning Coordinator did not include or provide an explanation for 3 or 4 of the criteria in its methodology.</u></p>	<p><u>Do not have a documented Design Plan.</u></p> <p><u>The Planning Coordinator did not include or provide an explanation for 5 or more of the criteria in its methodology.</u></p>

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

<p>R2</p>	<p>The Planning Coordinator made its credible island determinations available 31—45 days after the determination was made as described in R2.2</p> <p>OR</p> <p>The Planning Coordinator provided a written response to the commenting entity 46—60 days after a request as described in R2.3.</p>	<p>Have documented Functional Design Specifications, but they do not include all of the required elements. The Planning Coordinator made its credible island determinations available 46—60 days after the determination was made as described in R2.2.</p> <p>OR</p> <p>The Planning Coordinator provided a written response to the commenting entity 61—75 days after a request as described in R2.3.</p>	<p>Have a Functional Design Specification for some, but not all, of its Distribution Providers. The Planning Coordinator made its credible island determinations available 61—75 days after the determination was made as described in R2.2.</p> <p>OR</p> <p>The Planning Coordinator provided a written response to the commenting entity more than 76 days after a request as described in R2.3.</p>	<p>Do not have any Functional Design Specifications for its Distribution Providers. The Planning Coordinator did not evaluate and confirm credible islanding more than 15 months from the last evaluation as required in R2.1.</p> <p>OR</p> <p>The Planning Coordinator made its credible island determinations available more than 75 days after the determination was made as described in R2.2.</p>
------------------	--	---	---	---

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

<p>R3</p>	<p>The Planning Coordinator's methodology did not include exemption criteria, Off-nominal frequency relay types, simulation methods used, and/or maximum breaker interrupting times as described in R3.1.</p> <p>OR</p> <p>The Planning Coordinator made its methodology available 31—45 days after a request as described in R3.2.</p> <p>OR</p> <p>The Planning Coordinator provided a written response to the commenting entity 46—60 days after a request as described in R3.3.</p>	<p><u>Distributed the Functional Design Specifications to its Distribution Providers, but not to its adjacent Planning Coordinators.</u> The Planning Coordinator's methodology did not include the frequency and/or voltage characteristics, and/or evaluations of other schemes and potential effect on adjacent Planning Coordinators as described in R3.1.</p> <p>OR</p> <p>The Planning Coordinator made its methodology available 46—60 days after a request as described in R3.2.</p> <p>OR</p> <p>The Planning Coordinator provided a written response to the commenting entity 61—75 days after a request as described in R3.3.</p>	<p><u>Distributed the Functional Design Specifications to some, but not all, of the Distribution Providers and Planning Coordinators.</u> The Planning Coordinator made its methodology available more than 60 days after a request as described in R3.2.</p> <p>OR</p> <p>The Planning Coordinator provided a written response to the commenting entity more than 76 days after a request as described in R3.3.</p>	<p><u>Did not distribute the Functional Design Specification to any effected Distribution Providers and Planning Coordinators.</u> The Planning Coordinator's methodology did not include frequency set points and timing delays and/or did not meet the 30% load shed as described in R3.1.</p> <p>OR</p> <p>The Planning Coordinator does not have a documented methodology for design and performance of its UFLS program as described in R3.</p>
------------------	---	--	---	---

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

<p>R4</p>	<p><u>No review or revision of the UFLS program was performed in the next calendar year and within 16 months, but was performed within 18 months, of the last review.</u></p>	<p><u>No review or revision of the UFLS program was performed in the next calendar year and within 19 months, but was performed within 20 months, of the last review.</u></p> <p>OR <u>The review included the consideration of some, but Distribution Provider did not collect characteristics and critically of the end data or criticality of End-use Load that was provided by from the Load Serving Entities.</u></p>	<p><u>No review or revision of the UFLS program was performed in the next calendar year and within 21 months, but was performed within 22 months, of the last review.</u></p> <p>OR <u>The review did not include consideration of the characteristics or criticality of the end use Load.</u></p> <p>OR <u>The review included updating the UFLS program load data BUT failed to reflect the next year's projected peak hour Loads.</u></p>	<p><u>No review or revision of the UFLS program was performed in the next calendar year and within 24 months of the last review. The Distribution Provider review and update its UFLS program more than 15 months from the last evaluation</u></p>	<p>Formatted: Requirement, Space Before: 0 pt, After: 0 pt</p> <p>Formatted: Requirement, Space Before: 0 pt, After: 0 pt</p> <p>Formatted: Space Before: 0 pt, After: 0 pt</p> <p>Formatted: Requirement, Space Before: 0 pt, After: 0 pt</p>
<p>R5</p>			<p><u>Provided evidence that it implemented its assigned UFLS program Functional Design Specification, BUT it was lacking, inaccurate, misleading, or not provided as requested.</u></p>	<p><u>Did not provide any evidence it implemented its assigned program Functional Design Specification and does not have an extension or exemption from its Planning Coordinator. The Planning Coordinator did not review its UFLS program, and update it as needed, within 15 months of the last review.</u></p>	<p>Formatted: Space Before: 0 pt, After: 0 pt</p> <p>Formatted: Space Before: 0 pt, After: 0 pt</p>

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

<p>R6</p>	<p>The Planning Coordinator performed the assessment but did not include 1 of the performance elements.</p>	<p>The Planning Coordinator performed the assessment but did not include 2 of the performance elements.</p>	<p>Provided evidence that it complies with Table 1 and/or R6.1, BUT the evidence was lacking, inaccurate, misleading, or not provided as requested. The Planning Coordinator performed the assessment but did not include more than 2 of the performance elements.</p>	<p>Did not provide evidence that it complies with Table 1 and/or R6.1, and does not have an extension or exemption from its Planning Coordinator. The Planning Coordinator did not perform a periodic assessment of the expected performance of the UFLS program at least every 5 calendar years.</p>
<p>R7</p>	<p>New and updated data was provided more than 60 days, but less than 90 days after being requested. The Planning Coordinator provided the assessment report to the associated entities in 31—45 days.</p>	<p>New and updated data was provided more than 90 days, but less than 120 days after being requested. The Planning Coordinator provided the assessment report to the associated entities in 46—60 days.</p>	<p>New and updated data was provided more than 120 days, but less than 150 days after being requested. <u>OR</u> New and updated UFLS data were provided, but were lacking, inaccurate, misleading, or not provided as requested. The Planning Coordinator provided the assessment report to the associated entities in 61—75 days.</p>	<p>Did not provide the requested UFLS over 150 days after it was requested. The Planning Coordinator provided the assessment report to the associated entities more than 75 days from the request.</p>

Formatted: Space Before: 0 pt, After: 0 pt

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

<p>R8</p>	<p>The Distribution Provider or Transmission Owner did not provide 1 or 2 of the elements.</p>	<p>The Distribution Provider or Transmission Owner did not provide 3 or 4 of the elements.</p>	<p>Applicable data for any planned applicable reactive power devices or system protection schemes, that may impact the UFLS programs were provided, but it were lacking, inaccurate, misleading, or not provided as requested on time. The Distribution Provider or Transmission Owner did not provide 5 of the elements.</p>	<p>Did not provide applicable data for any planned applicable reactive power devices, system protection schemes, and/or that may impact the UFLS programs. The Planning Coordinator did not provide the data within 15 months of the last submittal.</p>
<p>R9</p>	<p>The Distribution Provider or Transmission Owner provided the data 61—75 days from the date of change.</p>	<p>Provided the applicable off-nominal frequency relay setting, but did not provide them prior to being placed in service. The Distribution Provider or Transmission Owner provided the data 76—90 days from the date of change.</p>	<p>Applicable data off-nominal frequency relay settings and time delays or other protective schemes that may impact the UFLS were provided, but were lacking, inaccurate, misleading, or not provided as requested. The Distribution Provider or Transmission Owner provided the data 90—105 days from the date of change.</p>	<p>No applicable data off-nominal frequency relay settings were provided. The Distribution Provider or Transmission Owner provided the more than 105 days from the date of change.</p> <p>OR</p> <p>The Distribution Provider or Transmission Owner did not supply information prior to placing new equipment in service.</p>

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

<p>R10</p>	<p><u>No review or revision of the UFLS database was performed in the next calendar year and within 16 months, but was performed within 18 months, of the last review. The Generator Owner provided the data 61—75 days from the date of change.</u></p>	<p><u>No review or revision of the UFLS database was performed in the next calendar year and within 19 months, but was performed within 20 months, of the last review. The Generator Owner provided the data 76—90 days from the date of change.</u></p>	<p><u>No review or revision of the UFLS database was performed in the next calendar year and within 19 months, but was performed within 22 months, of the last review. The Generator Owner provided the data 90—105 days from the date of change.</u></p>	<p><u>No review or revision of the UFLS database was performed in the next calendar year and within 24 months of the last review. The Generator Owner provided the data more than 105 days from the date of change.</u></p> <p>OR</p> <p><u>The Generator Owner did not supply information prior to placing new equipment in service.</u></p>	<p>Formatted: Requirement, Space Before: 0 pt, After: 0 pt</p>
<p>R11</p>	<p><u>No review of the data and assessment of the UFLS program were performed within five calendar years, BUT were performed within six years of the last review and assessment. The Generator Owner did not meet 1 of the criteria listed in Table 1 and did not arrange for additional load shedding.</u></p>	<p><u>No review was performed in a Planning Coordinator’s area of BOTH the UFLS program data AND the assessment of the UFLS programs associated with the data within the last six calendar years. The Generator Owner did not meet 2 of the criteria listed in Table 1 and did not arrange for additional load shedding.</u></p>	<p><u>No review was performed in a Planning Coordinator’s area of BOTH the UFLS program data AND the assessment of the UFLS programs associated with the data within the last seven calendar years. The Generator Owner did not meet 3 of the criteria listed in Table 1 and did not arrange for additional load shedding.</u></p>	<p><u>No review was performed in a Planning Coordinator’s area of BOTH the UFLS program data AND the assessment of the UFLS programs associated with the data within the last eight or more calendar years. The Generator Owner did not meet more than 3 of the criteria listed in Table 1 and did not arrange for additional load shedding.</u></p>	

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

R12		<u>Have a UFLS program assessment report, BUT it was provided to some, but not all, of the Distribution Providers, Transmission Planers and adjacent Planning Coordinators.</u>	<u>Have a UFLS program assessment report, BUT it was not provided to any of its Distribution Providers, Transmission Planners, or adjacent Planning Coordinators.</u>	<u>DoThe Distribution Provider, Transmission Owner, or Generation Owner did not have aimplement its portion of the UFLS program assessment report or related protective scheme prior to the next peak season.</u>
13	<u>The Planning Coordinator did not include 1 of the criteria in its UFLS database.</u>	<u>The Planning Coordinator did not include 2 of the criteria in its UFLS database.</u>	<u>The Planning Coordinator did not include 3 or more of the criteria in its UFLS database.</u>	<u>The Planning Coordinator did not update its UFLS database within 15 months of the last update.</u>
14	<u>The Planning Coordinator provided its database 31—45 days after a request.</u>	<u>The Planning Coordinator provided its database 46—60 days after a request.</u>	<u>The Planning Coordinator provided its database 60—75 days after a request.</u>	<u>The Planning Coordinator provided its database more than 75 days after a request.</u>

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)

Version History

Version	Date	Action	Change Tracking

Formatted: Border: Top: (Single solid line, Auto, 0.5 pt Line width)